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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,604	07/22/2003	Shinichi Okamura	038788.52620US	5034

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EXAMINER

GAGLIARDI, ALBERT J

ART UNIT	PAPER NUMBER
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2884

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/623,604		OKAMURA ET AL.	
	Examiner		Art Unit	
	Albert J. Gagliardi		2884	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Comment on Submissions

1. This Office Action is responsive to the Amendment and Remarks filed on 20 December 2006.

Information Disclosure Statement

2. The information disclosure statement filed 11 January 2007 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each document listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 2884

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enachescu et al. (U. S. Patent 6,840,666) and further in view of Nanri et al. (U. S. Patent 6,024,904).

Enachescu discloses an apparatus and method for finding disconnections and defects in the conductive wire pattern of an LCD panel 500 (thus glass plate), the apparatus comprising:

- a power source 330 for applying a voltage to the conductive wires on the panel;
- infrared image sensor 315, such as an infrared camera, for imaging thermal radiation from a surface of the conductive wire, thereby producing a temperature distribution image (see Figs.3, 5 and Col.3, lines 35-67, Col.4, lines 57-67).

In operation, to find disconnections and defects in the conductive wires of the LCD panel a voltage is applied to the panel to heat the conductive wires and the thermal radiation emanating from the surface of the conductive wires is imaged using an infrared camera while the conducting wires is heated and thereby producing a temperature distribution image.

Regarding claims 1, 8, 10, 11, 12, 19, 20, 22, 28 Enachescu fails to specifically disclose that the conducting wires are formed on a vehicular plate glass which wires provide antifogging, however, since Enachescu provides a device and method for inspecting conductive wires regardless of what arrangement the wires are used in as long as they are part of a conductive wire pattern, it would have been obvious to use the Enachescu device and method on the antifogging conductive wire pattern of Nanri (used in the windshield of a car) to detect defects in the wire pattern, since 1) the conductive wires of Nanri are formed like any other integrated wire circuits,

Art Unit: 2884

and in the alternative: 2) the recitation that “the conductive wire is formed on a vehicular plate glass used as a heating wire” has not been given any patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim is drawn to a structure and the portion of the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause (*Kropa v. Robie*, 88 USPQ 478 (CCPA)); 3) it has been held that to be entitled to weight in a method claims, the recited structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure (*Ex parte Pfeiffer*, 1962 C.D. 408 (1961)); 4) it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations (*Ex parte Masham*, 2 USPQ 2d 1647 (1987)).

Regarding claim 2, 13, 22, 23-27 Enachescu discloses that the temperature distribution image is subjected to binarization by an image processor 320 (see Fig.10, 11, Col.9, line 41-Col.10, line 65), which binarization can be limited to either type or position or size of the defect (see Col.10, lines 23-65). In addition, regarding claim 23, the examiner notes that while Enachescu discloses, either in regard to their current invention, or the prior art, that the test configuration can be designed to analyze a plurality of test vectors simultaneously, it is considered an obvious, if less efficient aspect of the apparatus or prior art disclosed by Enachescu that less than all test vectors (i.e., only a single test vector relating to only the source lines, for example) could be performed. In such a limited case, with the source lines all being parallel, the level of analysis would obviously be reduced such that only a portion of the image

Art Unit: 2884

need to be analyzed to determine a discontinuity anywhere in the entirety of the source lines, for example.

Regarding claims 3-7, 9, 14-18, 21 Enachescu discloses that in order to determine the position of the defects the temperature distribution image (test image) is superimposed on the image representing the pattern of the conductive wires (reference image), where the pattern image is done prior to the thermal imaging (reference images), and the faulty wires are found by subtracting the two images (see Col.7, line 21-Col.8, line 50, Figs.6C-12).

Response to Arguments

6. Applicant's arguments filed 20 December 2006 have been fully considered but they are not persuasive.

Regarding applicant's argument that there is no motivation for combining the teachings of Enachescu with that of Nanri, the examiner disagrees. It is noted that Enachescu is generally relevant to the inspection of conductive wiring of glass panels by utilizing infrared (thermal) emissions induced by the application of a voltage to the conductive elements to cause heating of the elements. As such, Enachescu is viewed as relevant to the inspection of any glass panel devices including conductive wiring. Nanri merely supports the notion that is otherwise commonly known, that vehicular windows include conductive elements.

Further regarding applicant's argument that Enachescu is directed to detecting defects as a whole, as opposed to merely detecting defects in the conductive wiring, the examiner notes that patents are relevant as prior art for all they contain, not just preferred embodiments. As noted in *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)) "The use of patents as

Art Unit: 2884

references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998). See MPEP 2123. As such, even though Enachescu is concerned with more than just evaluating the conductive elements, it is still relevant for its teaching of detecting defects in conductive wires.

Regarding applicants argument regarding amended claim 23, such argument has been addressed in the additional discussion regarding claim 23. In additional, the discussion regarding the removal/reuse of the glass is not convincing because the limitations relate to limitations not claimed.

In addition to the above, the examiner further calls applicant's attention to the newly cited Walton (US 6,614,922 B1) reference which clearly supports the examiner's contention the wire pattern testing of conductive wiring utilizing infrared/thermal imaging is to other glass panels such as automotive windows (see abstract).

7. All of applicant's arguments having been fully addressed, the rejection is maintained.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436.

The examiner can normally be reached on Monday thru Friday from 10 AM to 6 PM.

Art Unit: 2884

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Albert J. Gagliardi
Primary Examiner
Art Unit 2884

AJG